

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014

Subject Code: 180203**Date: 29-11-2014****Subject Name: Special Purpose Vehicles****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Classify the special purpose vehicles and give the application of each. **07**
(b) Explain the working of hydraulic brake system with neat sketch. **07**
- Q.2** (a) Explain in detail the tracked vehicles used by armed forces. **07**
(b) Draw the layout of solar vehicle and explain its working. **07**
- OR**
- (b) Explain the hydrodynamic steering system used in special purpose vehicles. **07**
- Q.3** (a) List the various types of excavators and explain hydraulic excavator. **07**
(b) Draw sketch of dozer and explain its purpose and working in detail. **07**
- OR**
- Q.3** (a) Explain construction of a shovel with neat sketch. **07**
(b) Explain wheel loader with its application and list its attachments can be extended to wheel loader? **07**
- Q.4** (a) Write the special features of tractor. **07**
(b) Explain types of crane and explain characteristics of mobile crane. **07**
- OR**
- Q.4** (a) List the different types of implement used in tractors and explain any one. **07**
(b) Draw a sketch of tractor and explain the complete layout of each and every component. **07**
- Q.5** (a) Explain tracked vehicle and articulated vehicles. **07**
(b) Give the difference between series hybrid and parallel hybrid vehicles. **07**
- OR**
- Q.5** (a) Explain electrical vehicles with neat sketch. **07**
(b) Explain (1) multi axle vehicles (2) fifth wheel mechanism. **07**
